WHAT IS CLAIMED:

1. A lens mount apparatus for the front of a video camera that has a face plate and a combination video lens mount and video image detector unit mounted on the video camera face plate, comprising;

a replacement face plate mounted on the front of the video camera as a replacement for the video camera face plate;

a lens mount mechanism provided on said replacement face plate for selectively and interchangeably receiving lenses on an optical axis of said lens mount mechanism; and

fasteners adjustably mounting the combination video lens mount and video image detector unit on said lens mount mechanism with an optical axis of the video image detector aligned with said optical axis of said lens mount mechanism.

2. The lens mount apparatus of claim 1, wherein said lens mount mechanism includes a lens support ring concentric with the optical axis of said mechanism, said support ring having oversized openings therethrough for receiving said fasteners and allowing the adjustment of the combination unit relative to said mechanism.

3. The lens mount apparatus of claim 2, wherein said oversized openings are U-shaped openings with the open end facing radially inwardly.

4. The lens mount apparatus of claim 2, wherein said support ring has an external thread for threadedly receiving a lock ring for locking a lens onto said support ring.

5. The lens mount apparatus of claim 2, wherein said support ring is removably mounted on said replacement face plate.

6. The lens mount apparatus of claim 2, wherein said support ring is of a larger diameter than the video lens mount for allowing interchangeably lenses also to be mounted on the video lens mount.

7. The lens mount apparatus of claim 1, further comprising:

a top plate positioned on the top of and at the front of the video camera, said top plate being engaged by said replacement face plate;

a bottom plate positioned on the bottom of and at the front of the video camera, said bottom plate being engaged by said replacement face plate;

said replacement face plate, top plate and bottom plate each having an inner surface that substantially fits onto an outer surface of the video camera at the locations of each of said plates; and

fasteners releasably attaching each said plate to the video camera and said replacement face plate to said top and bottom plates.

8. A lens mount apparatus for removably supporting interchangeable lenses on the front of a video camera separately and alternatively to a lens mount provided with the video camera, comprising;

a replacement face plate positioned on the front of the video camera replacing the video camera face plate;

a lens mount mechanism provided on said replacement face plate for selectively and interchangeably receiving the lenses, said lens mount mechanism having an opening surrounding the opening of the lens mount of the video camera;

a top plate positioned on the top of and at the front of the video camera, said top plate being engaged by said replacement face plate;

a bottom plate positioned on the bottom of and at the front of the video camera, said bottom plate being engaged by said replacement face plate;

said replacement face plate, said top plate and said bottom plate each having an inner surface that substantially fits on an outer surface of the video camera at the locations of each of said plates; and

fasteners releasably attaching each said plate to the video camera and said replacement face plate to said top and bottom plates.

9. The lens mount apparatus of claim 8, wherein said replacement face plate extends above the top of the video camera in front of said top plate.

10. The lens mount apparatus of claim 9, wherein said replacement face plate has a dovetail across the bottom thereof, and said bottom plate has a dovetail fitting onto the dovetail of said replacement face plate.

11. The lens mount apparatus of claim 8, wherein said replacement face plate has a dovetail across the bottom thereof, and said bottom plate has a dovetail fitting onto the dovetail of said replacement face plate.

12. The lens mount apparatus of claim 8, wherein said replacement face plate, said top plate and said bottom plate each extend laterally for substantially the full width of the video camera at the locations of each of said plates.

13. The lens mount apparatus of claim 8, wherein a combination lens mount and image detector unit of the video camera is mounted on an inside surface of said lens mount mechanism and extends behind said replacement face plate.

14. The lens mount apparatus of claim 13, wherein said lens mount mechanism is provided with an adjustable support for mounting the combination unit on the inside of said lens mount mechanism with the image detector device centered on said lens mount mechanism.

15. The lens mount apparatus of claim 14, wherein said adjustable support includes oversized openings for receiving machine screws threadedly connected to said combination unit for allowing adjustment movement of said combination unit relative to said lens mount mechanism in a plane parallel to said replacement face plate.

16. The lens mount apparatus of claim 10, wherein a combination lens mount and image detector unit of the video camera is mounted on an inside surface of said lens mount mechanism.

17. The lens mount apparatus of claim 16, wherein said lens mount mechanism is provided with an adjustable support for mounting the combination unit on the inside of said lens mount mechanism with the image detector device centered on said lens mount mechanism.

18. The lens mount apparatus of claim 17, wherein said adjustable support includes oversized openings for receiving machine screws threadedly connected to said combination unit for allowing adjustment movement of said combination unit relative to said lens mount mechanism in a plane parallel to said replacement face plate.

19. A lens mount apparatus for removably supporting interchangeable lenses on the front of a video camera separately and alternatively to a lens mount provided with the video camera, comprising;

a reinforcing structure mounted on the front of the video camera and extending over a portion of the top of the video camera;

said reinforcing structure having an inner surface that substantially fits an outer surface of the video camera at the front and top;

a lens mount mechanism provided on a front of said reinforcing structure for selectively and interchangeably receiving the lenses, said lens mount mechanism having an opening surrounding the opening of the lens mount of the video camera; and

fasteners releasably attaching each said reinforcing structure to the front, top and bottom of the video camera.

20. The lens mount apparatus of claim 19, wherein said reinforcing structure is comprised of at least two separate plates fastened together.

21. The lens mount apparatus of claim 19, wherein said reinforcing structure is comprised of three separate plates with one on the front, one on the top and one on the bottom, said plate on the bottom extending over a portion of the bottom of the video camera, and said three separate plates fastened together.

22. The lens mount apparatus of claim 19, wherein a combination lens mount and image detector unit of the video camera is adjustably mounted on the inside of said lens mount mechanism for centering the image detector relative to said lens mount mechanism.

23. A lens mount apparatus for removably supporting interchangeable lenses on the front of a video camera that has a face plate and a combination video lens mount and video image detector unit mounted on the video camera face plate, comprising:

a replacement face plate mounted on the front of the video camera as a replacement for the video camera face plate;

a lens mount mechanism mounted on said replacement face plate for selectively receiving the interchangeable lenses on an optical axis of said lens mount mechanism;

fasteners adjustably mounting the combination video lens mount and video image detector unit on said lens mount mechanism with an optical axis of the video image detector aligned with said optical axis of said lens mount mechanism; and

a lens mount housing comprising a base for the replaceable lens, said lens mount housing having axially extending arcuate projections for slidably engaging an axially facing internal surface on said lens mount mechanism for supporting and axially aligning the lens on the lens mount mechanism, said arcuate projections being circumferentially spaced from each of said fasteners when said lens mount housing is locked in position on said lens mount mechanism.

24. The lens mount apparatus of claim 23, wherein said arcuate projections comprise a major portion of the circumference of said lens mount housing.

25. The lens mount apparatus of claim 24, wherein said lens mount housing is provided with an axially facing mounting surface for engaging an opposing axially facing mounting surface on the lens mount mechanism, said axially facing surfaces being outwardly, in both a radial and an axial direction, from said arcuate projections.

26. The lens mount apparatus of claim 23, wherein said lens mount housing is provided with an axially facing mounting surface for engaging an opposing axially facing mounting surface on the lens mount mechanism, said axially facing surfaces being outwardly, in both a radial and an axial direction, from said arcuate projections.

27. The lens mount apparatus of claim 23, wherein said arcuate projections have an external surface of a diameter less than about 0.0013 in. smaller than a diameter of said internal surface on said lens mount mechanism.

28. The lens mount apparatus of claim 27, wherein said arcuate projections external surface is of a 2.8600 in., +0.000 in., -0.003 in., diameter.

29. The lens mount apparatus of claim 26, wherein said axially facing mounting surface on said lens mount housing is provided on a plurality of radial flanges.

30. The lens mount apparatus of claim 29, wherein said lens mount housing has four said radial flanges, and said radial flanges are equally spaced circumferentially.

31. The lens mount apparatus of claim 29, wherein each said radial flange has an axial thickness of about 0.125 in.